

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claims 35, 54 and 55.

Add claims 58-77.

35. (Currently Amended) An apparatus for dispensing materials to vegetation, the apparatus comprising

a conduit ~~including~~ having an interior and exterior, wherein the conduit interior includes a channel;

an outlet coupled to the channel for conveying a substance from the channel to the vegetation; and

a sensor coupled to the conduit exterior, for sensing a condition external to the conduit interior related to growth of the vegetation.

36. (Original) The apparatus of claim 35, wherein one or more sensors is associated with a particular outlet, the apparatus further comprising

a flow control coupled to the particular outlet for regulating an amount of the substance conveyed to the vegetation; and

a control system coupled to the flow control and to the one or more sensors associated with the particular outlet, for sending a signal to regulate an amount of the substance conveyed to the vegetation in response to a signal from the one or more sensors.

37. (Original) The apparatus of claim 36, wherein the control system includes a microprocessor.

38. (Original) The apparatus of claim 35, wherein the sensor includes an optical sensor.

39. (Original) The apparatus of claim 38, wherein the sensor includes a photodetector.

40. (Original) The apparatus of claim 35, wherein the sensor includes a humidity sensor.

41. (Original) The apparatus of claim 35, wherein the sensor includes a leaf wetness sensor.

42. (Original) The apparatus of claim 35, wherein the sensor includes a temperature sensor.

43. (Original) The apparatus of claim 35, wherein the sensor includes an insect sensor.

44. (Original) The apparatus of claim 43, wherein the sensor includes a protein sensor.

45. (Original) The apparatus of claim 43, wherein the sensor includes a DNA sensor.

46. (Original) The apparatus of claim 43, wherein the sensor includes a sticky trap.

47. (Original) The apparatus of claim 43, wherein the sensor includes a pheromone detector.

48. (Original) The apparatus of claim 35, wherein the sensor includes a temperature sensor.

49. (Original) The apparatus of claim 35, wherein the sensor includes an infrared sensor.

50. (Original) The apparatus of claim 35, wherein the sensor includes a sugar accumulation sensor.

51. (Original) The apparatus of claim 35, wherein the sensor includes a pH probe.

52. (Original) The apparatus of claim 35, wherein the sensor includes a soluble solids sensor.

53. (Original) The apparatus of claim 35, wherein the sensor includes a sugar accumulation sensor.

54. (Currently Amended) An apparatus for dispensing materials to vegetation, the apparatus comprising

a conduit ~~including~~ having an interior and exterior, wherein the conduit interior includes a channel;

a plurality of outlets coupled to the channel for conveying a substance from the channel to the vegetation;

a plurality of sensors coupled to the conduit exterior, for sensing a condition external to the conduit interior related to growth of the vegetation; and

a control circuit coupled to the conduit for controlling conveyance of the substance in response to the sensed condition.

55. (Currently Amended) A method for dispensing a material to vegetation, the method comprising:

using a sensor coupled to a conduit to sense a condition relating to growth of the vegetation, wherein the conduit has an interior and exterior, wherein the conduit interior includes a channel;

dispensing the material via an outlet;

controlling the dispensing of the material via the outlet by using a signal from the sensor, wherein the sensor senses a condition external to the conduit interior related to growth of the vegetation ~~and control circuit are in close proximity to the outlet.~~

56. (Previously Presented) The method of claim 55, wherein the conduit includes a channel, the method further comprising:

conveying the material to the outlet via the channel.

57. (Previously Presented) The method of claim 56, wherein multiple outlets are coupled at different points along the conduit, wherein different sensors and control circuits are used to control different outlets.

58. (New) An apparatus for dispensing a material to vegetation, the apparatus comprising:

a conduit having an interior and an exterior, wherein the conduit interior includes a channel for transfer of the material;

a plurality of sensors coupled to the conduit exterior and spaced at regular intervals, wherein the sensors sense at least one condition external to the conduit interior, wherein the condition is related to growth of the vegetation; and

an outlet coupled to the channel for dispensing the material in response to one or more of the plurality of sensors.

59. (New) The apparatus of claim 58, wherein the vegetation includes plants spaced at regular intervals, wherein the sensor spacing is substantially equal to the plant spacing.

60. (New) The apparatus of claim 59, wherein the plants include grape vines.

61. (New) The apparatus of claim 58, wherein the sensor includes an optical sensor.

62. (New) The apparatus of claim 58, wherein the sensor includes a photodetector.

63. (New) The apparatus of claim 58, wherein the sensor includes a humidity sensor.

64. (New) The apparatus of claim 58, wherein the sensor includes a leaf wetness sensor.

65. (New) The apparatus of claim 58, wherein the sensor includes a temperature sensor.

66. (New) The apparatus of claim 58, wherein the sensor includes an insect sensor.

67. (New) The apparatus of claim 58, wherein the sensor includes a protein sensor.

68. (New) The apparatus of claim 58, wherein the sensor includes a DNA sensor.

69. (New) The apparatus of claim 58, wherein the sensor includes a sticky trap.

70. (New) The apparatus of claim 58, wherein the sensor includes a pheromone detector.

71. (New) The apparatus of claim 58, wherein the sensor includes a temperature sensor.

72. (New) The apparatus of claim 58, wherein the sensor includes an infrared sensor.

73. (New) The apparatus of claim 58, wherein the sensor includes a sugar accumulation sensor.

74. (New) The apparatus of claim 58, wherein the sensor includes a pH probe.

75. (New) The apparatus of claim 58, wherein the sensor includes a soluble solids sensor.

76. (New) The apparatus of claim 58, wherein the sensor includes a sugar accumulation sensor.

77. (New) A method for dispensing a material to regularly spaced plants, the method using a conduit having sensors placed on an exterior of the conduit at regular spacing, the method comprising:

placing the conduit in proximity to the regularly spaced plants so that the sensors' regular spacing is in substantial alignment with the plants' regular spacing.

78. (New) The method of claim 77, wherein the plants include grape vines.

79. (New) The method of claim 35, wherein a plurality of sensors is coupled to the conduit exterior and spaced at regular intervals.